IN THE CLAIMS

1. (Original) An alcohol-air fuel cell comprising an anode chamber with a liquid catalytically active anode, an air chamber with a catalytically active gas-diffusion cathode, an electrolyte chamber with a liquid electrolyte and a membrane electrolyte, which is positioned between the cathode and the anode, characterized in that an aqueous alkaline solution is used as the liquid electrolyte and a non-platinum catalyst, tolerant in respect to alcohol, is used as the cathode catalyst.

2. (Original) The fuel cell according to claim 1, characterized in that a porous matrix impregnated with an alkaline electrolyte is used as the membrane electrolyte.

3. (Original) The fuel cell according to claim 2, characterized in that an asbestos matrix is used as the porous matrix.

4. (Original) The fuel cell according to claim 1, characterized in that an anion-exchange membrane is used as the membrane electrolyte.

5. (Original) The fuel cell according to claim 4, characterized in that a membrane of polybenzimidazole, doped with OH ions, is used as the anion-exchange membrane.

6. (Original) The fuel cell according to claim 1, characterized in that a two-layer gas-diffusion electrode with a hydrophilic barrier layer facing toward the electrolyte chamber and with an active layer facing toward the air chamber is used as the cathode.

7. (Original) The fuel cell according to claim 1, characterized in that a two-layer

gas-diffusion electrode with a hydrophilic barrier layer facing toward the air chamber and with an active layer facing toward the electrolyte chamber is used as the cathode.

8. (Original) The fuel cell according to claim1, characterized in that the anode consists of an active layer, comprising 3-7 wt. % of fluoroplastic, and a membrane on the base of polybenzimidazole.

9. (Original) The fuel cell according to claim1, characterized in that the anode consists of an active layer, comprising 2-7 wt. % of polybenzimidazole, and a membrane on the base of polybenzimidazole.

10. (Original) The fuel cell according to claim 1, characterized in that the anode consists of a porous nickel band, filled with polybenzimidazole, and an active layer comprising 3-7 wt. % of fluoroplastic.

11. (Original) The fuel cell according to claim1, characterized in that the anode consists of a porous nickel band, filled with polybenzimidazole, and an active layer comprising 2-7 wt. % of polybenzimidazole.

12. (Original) The fuel cell according to claim 1, characterized in that the anode consists of asbestos, impregnated with polybenzimidazole, and an active layer comprising 3-7 wt. % of fluoroplastic and 2-7 wt. % of polybenzimidazole.

13. (Original) The fuel cell according to claim1, characterized in that a nickel-ruthenium system is used as the anode catalyst.

14. (Original) The fuel cell according to claim1, characterized in that silver on a carbon carrier is used as the non-platinum catalyst.

15. (Original) The fuel cell according to claim 14, characterized in that the content of silver on the carrier is 7-18 wt. %.

16. (Original) The fuel cell according to claim 14, characterized in that carbon black or graphite with a specific surface of at least 60-80 m^2/g is used as the carbon carrier for the silver catalyst.

17. (Original) The fuel cell according to claim 1, characterized in that pyropolymers of N_4-complexes on a carbon carrier are used as the non-platinum catalyst.

18. (Original) The fuel cell according to claim 17, characterized in that the content of the pyropolymer on the carbon carrier is 10-20 wt. %.

19. (Original) The fuel cell according to claim 17, characterized in that carbon black or graphite with a specific surface of at least 60-80 m^2/g is used as the carbon carrier for the pyropolymer catalyst.

20. (Original) The fuel cell according to claim 13, characterized in that Raney nickel with a ratio Ni: Al equal to 50: 50 is used as the anode catalyst of the nickel-ruthenium system.

21. (Original) The fuel cell according to claim 20, characterized in that the Renay nickel used in the anode catalyst additionally comprises a molybdenum additive with a ratio Ni: Al: Mo equal to 40: 50: 10.

22. (Original) The fuel cell according to claim 20, characterized in that the Renay nickel used in the anode catalyst is additionally promoted with platinum.

23. (Original) The fuel cell according to claim 21, characterized in that the Renay nickel with the molybdenum additive, used in the anode catalyst, is additionally promoted with platinum.

24. (Currently Amended) The fuel cell according to claim 22 ~~or claim 23~~, characterized in that the content of platinum and ruthenium in the anode catalyst is 8-15 wt. % with the content of platinum equal to 0.08-0. 3 wt. %.

25. (Currently Amended) The fuel cell according to ~~any one of claims~~ claim 22 ~~-24~~, characterized in that platinum and ruthenium are present in the anode catalyst in the form of crystals of Pt-Ru alloy having a size of 5-7 nm and a specific surface of 45-60m^2/g.

26. (Original) The fuel cell according to claim 13, characterized in that the anode has a three-layer structure including a porous base, a layer facing the electrolyte, filled with polybenzimidazole, and an active layer comprising a catalyst and polybenzimidazole.